

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference B03/0364PC | FOR FURTHER ACTION | See Form PCT/IPEA/416 |
| International application No. PCT/EP2004/012280 | International filing date (<i>day/month/year</i>) 29.10.2004 | Priority date (<i>day/month/year</i>) 29.10.2003 |
| International Patent Classification (IPC) or national classification and IPC C07C2/66, C11D1/22 | | |
| Applicant BASF AKTIENGESELLSCHAFT | | |

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| 1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. |
| 2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet. |
| 3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of <u>3</u> sheets, as follows: <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). |
| 4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application |

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| Date of submission of the demand | Date of completion of this report |
| Name and mailing address of the IPEA/EP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/012280

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-4, 6-12 as originally filed/furnished
- pages* 5 received by this Authority on 14.07.2005 with letter of 14.07.2005
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. 2-11 as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1 received by this Authority on 14.07.2005 with letter of 14.07.2005
- nos.* _____ received by this Authority on _____
- ☐ the drawings:
- sheets _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/012280

| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | |
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| 1. | Statement | | |
| | Novelty (N) | Claims | YES |
| | | Claims 1-11 | NO |
| | Inventive step (IS) | Claims | YES |
| | | Claims 1-11 | NO |
| | Industrial applicability (IA) | Claims 1-11 | YES |
| | | Claims | NO |
| 2. | Citations and explanations (Rule 70.7) | | |
| | <p>This report makes reference to the following document:</p> <p>D1: WO 03/029172 A (SCHINDLER GOETZ-PETER; STEINBRENNER ULRICH (DE); BASF AG (DE); MAAS H) 10 April 2003 (2003-04-10)</p> <p>Novelty (PCT Article 33(2))</p> <p>D1 relates to a method of producing alkylaryl compounds and alkylarylsulfonates, alkylaryls and alkylarylsulfonates obtainable by means of this method, the use of the latter as surfactants, preferably in detergents and cleaners, and detergents and cleaners containing these compounds (D1, page 1, lines 8-11). It is already known from D1 that the ratio of terminal phenylalkanes (2- and 3-phenylalkanes) to internal phenylalkanes (4-, 5-, 6-phenylalkanes) plays a roll for the product properties (D1, page 1, lines 29-33). D1 (page 1, lines 29-33) and the present application (page 1, lines 29-30) suggest a 2-phenyl concentration of approximately 20-40% and a 2- and 3-phenyl concentration of approximately 40-60%. D1 (page 2, lines 1-8) and the present application (page 2, lines 1-7) acknowledge that a solution of LAS with very high or very low 2- and 3-phenyl concentrations can result in sub-optimal</p> | | |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
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solubility behavior.

The olefins according to the present claim 1 can be produced by means of the method a1-b1-d (page 5, lines 25-34) or a2-b2 (page 6, lines 10-15). The olefins according to D1 can be produced by means of the same methods (page 4, lines 4-13; page 4, line 33 to page 4, line 3). The alkylation process of D1 and of the present application are also carried out using the same catalysts (see D1, page 28, lines 23-31 and the present application, page 6, lines 20-22).

The present application (page 5, lines 20-24) states: "The olefin mixture can come from a number of sources and can be aftertreated by means of suitable steps ... For example, linear or targetedly branched olefins can be added to a mixture ..." However, such an aftertreatment is not mentioned in the embodiments or in the claims of the present application. Moreover, the fact that such an aftertreatment can be carried out is not regarded as limiting.

Thus D1 uses the same starting products in the same methods as the present application. D1 therefore implicitly discloses that olefins according to the present application are produced in order to produce alkylaryl compounds.

The subject matter of claims 1 to 11 therefore fails to meet the requirement of PCT Article 33(2) and (3).